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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,548	08/07/2000	GEORG WIRTH	67066	2930
23872	7590	07/14/2004	EXAMINER	
MCGLEW & TUTTLE, PC 1 SCARBOROUGH STATION PLAZA SCARBOROUGH, NY 10510-0827			MCHENRY, KEVIN L	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/582,548

Applicant(s)

WIRTH ET AL.

Examiner

Kevin L McHenry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-48 is/are pending in the application.
- 4a) Of the above claim(s) 24 and 46-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-45 is/are rejected.
- 7) ☒ Claim(s) 26,29-31,33-35,37,38 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/27/00 & 10/25/00.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***Election/Restrictions***

1. Newly submitted claims 46-48 and 24 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the originally elected invention was drawn to a ceramic monolith mount that included an exhaust unit housing and a mounting mat that is wrapped around a ceramic monolith mounted within the housing. Further, the examiner notes that the common technical feature of the two inventions, a mounting mat with a plurality of layers, is taught by Sanocki et al. (U.S.P. 5,882,608).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 46-48 and 24 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 8. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 26, 34, and 38 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 26, 34, and 38 recite process steps without citing limitations to further limit the structure of the apparatus.

4. Claims 29-31, 33-35, 37, and 40 are objected to because of the following informalities:

Claims 29-31, 33, 35, 37, and 40 are objected to for using process language such as the recitation of steps to further limit the structure of the apparatus.

In claim 30, the thickness should be in micrometers.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 43 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 43 uses the language "...wherein the loops are in contact with and bonded on said top side and said underside of said fiber mat." It is unclear how the loops can be

in contact with and bonded to the top side and underside of the fiber mat. For examination purposes the examiner interpreted this language to mean "...wherein the loops extend from said top side to said underside of said fiber mat."

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 25, 28, 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Merry (U.S.P. 5,008,086).

Merry teaches a ceramic monolith mount that includes a housing and a multilayer mounting mat that includes a mounting mat and a metal fabric swelling mat. The mounting mat is composed of aluminosilicate fibers, expanded vermiculite, and binder. The metal fabric swelling mat is mounted on the outside of the mounting mat to protect the edges of the mounting mat, effecting a treatment to minimize erosion. The metal fabric may be cut more narrowly than the mounting mat. A ceramic monolith is wrapped by the mat and mounted in the housing. Merry teaches that the fibers are oriented at an angle of 15° to 75° to the edge of the mat. (See U.S.P. 5,008,086; column 2, lines 35-68; column 3, lines 1-12).

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10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 25-31, 37, 38, 40, and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Sanocki et al. (U.S.P. 5,882,608).

Sanocki et al. teach a ceramic monolith mount with a housing and a multilayer mounting mat that includes a mat of intumescent material and inserts of ceramic fibrous material. The first mat includes aluminosilicate fibers, expanded vermiculite, and organic binder. Sanocki et al. further cite Rogers et al. (U.S.P. 5,290,522) for mat materials. Rogers et al. teach that the aluminosilicate fibers may be 9 or 10 micrometers in diameter. This mat joined with the fibrous inserts to protect the mat, effecting an erosion resistant treatment. A ceramic monolith is wrapped with the mat and inserted in the housing with the mat keeping the monolith in place. The mat and insert may be joined together with tongue and cutout interlocking means. The insert may also be cut more narrowly than the mat and the insert may be inserted in recesses or indentations of the mat. Sanocki et al. further teach that the inserts may be treated with resin bonding by organic binders. (See U.S.P. 5,882,608; Figures 2, 4A, 4B, 5A, 6A, 10, and 11; column 1, lines 5-7; column 4, lines 7-67; column 5, lines 8-13, 27-32, 66-67; column 6, lines 1-2, 20-50; column 7, lines 1-9, 45-51; column 8, lines 23-30, 45-46).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merry (U.S.P. 5,008,086) as applied to claims 40-42 above, and further in view of Harding (U.S.P. 6,017,498).

Merry teaches the ceramic monolith mount noted above in section 9. However, Merry does not teach that the fabric mat has loops.

Harding teaches a ceramic monolith mount in which the monolith support includes a metal fabric with loops that extend from the top side to the bottom side of the mat. Harding teaches that this mat has enhanced cushioning of the monolith, is cost effective, has long life. (See U.S.P. 6,017,498; column 1, lines 3-5, 13-15; column 2, lines 1-3, 32-34).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the mount of Merry by the teachings of Harding. One would have been motivated to do so in order to provide a fabric that would enhance cushioning of the monolith, be cost effective, and have long life, as taught by Harding.

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14. Claims 44, 45, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanocki et al. (U.S.P. 5,882,608) as applied to claims 25-31, 37, 38, 40, and 41 above.

Sanocki et al. teach the ceramic monolith mount noted above in section 11. However, Sanocki et al. do not teach that connection joint of the mat and insert may have a wavy shape.

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the mount of Sanocki et al. to use wavy shaped joints so that the edges of the joint were not sharp. One of ordinary skill in the art of materials understands that sharp edges and corners are stress risers that cause higher stresses in materials and increase the likelihood of material failure. To avoid this, one of ordinary skill in the art would adopt shapes and edges that avoid sharp edges and corners.

15. Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanocki et al. (U.S.P. 5,882,608) as applied to claims 25-31, 37, 38, 40, and 41 above, and further in view of Uesugi et al. (U.S.P. 4,598,790) or Inoue et al. (U.S.P. 4,589,516).

Sanocki et al. teach the ceramic monolith mount noted above in section 11. While Sanocki et al. teach the resin bonding of the insert, Sanocki et al. do not teach a treatment with a specific resin or adhesive.

Uesugi et al. teach a fibrous mat that is treated with water glass. Uesugi et al. teach that this mat has stronger binding forces and is highly heat resistant and durable. (See U.S.P. 4,598,790; column 1, lines 33-40, 47-50; column 3, lines 23-26).



Inoue et al. teach a fibrous mat that is treated with water glass. Inoue et al. teach that this mat is lightweight and is sufficiently strong to withstand heat and pressure variations. (See U.S.P. 4,589,516; column 1, lines 36-39, 58-62).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the mount of Sanocki et al. by the teachings of Uesugi et al. or Inoue et al. One would have been motivated to do so in order to provide a mat that has strong binding forces and is highly heat resistant and durable, as taught by Uesugi et al., or to provide a mat that is lightweight and is sufficiently strong to withstand heat and pressure variations, as taught by Inoue et al.

16. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanocki et al. (U.S.P. 5,882,608) as applied to claims 25-31, 37, 38, 40, and 41 above, and further in view of Tojo et al. (U.S.P. 6,162,404).

Sanocki et al. teach the ceramic monolith mount noted above in section 11. Sanocki et al. do not teach the use of a phenolic resin.

Tojo et al. teach a ceramin monolith mount that includes a fibrous mat that is impregnated with a phenolic resin. (See U.S.P. 6,162,404; column 6, lines 47-67; column 7, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the mount of Sanocki et al. by the teachings of Tojo et al. One would have been motivated to use the phenolic resin taught by Tojo et al. as a strengthening binder or as a compressing means.

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Merry (U.S.P. 5,028,397), Rogers et al. (U.S.P. 5,290,522), Langer et al. (U.S.P. 6,365,267), Merry (U.S.P. 4,617,176), Corn (U.S.P. 5,332,609), Langer et al. (U.S.P. 6,051,193), Stroom et al. (U.S.P. 6,245,301), Hornback III et al. (U.S. 2001/0051116), Worner (U.S.P. 5,094,073), Lebold et al. (U.S.P. 5,384,188), EP 0 719 912, and Langer et al. (U.S. 2001/0046456) are cited of interest for illustrating the state of the art in ceramic mount design.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L McHenry whose telephone number is (571) 272-1181. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin McHenry

Kiley Stoner AU 1725

 7/12/09